DETAILED ACTION

Claim Objections

Claim 8 is objected to because of the following informalities:

"Guide image generating means" is recited twice. The claim will be examined assuming that the second "guide image generating means" is a "guide image sending means". Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Where applicant acts as his or her own lexicographer to specifically define a term of a claim contrary to its ordinary meaning, the written description must clearly redefine the claim term and set forth the uncommon definition so as to put one reasonably skilled in the art on notice that the applicant intended to so redefine that claim term. *Process Control Corp. v. HydReclaim Corp.*, 190 F.3d 1350, 1357, 52 USPQ2d 1029, 1033 (Fed. Cir. 1999). The term "three-dimensional" in claims 1-10 is used by the claim to mean "panoramic two-dimensional view orthogonal to a map", while the accepted meaning is "having or appearing to have three dimensions (= length, width, and height)." The term is indefinite, although the specification describes what is meant, because the specification does not clearly set

forth the normal definition of "three dimensional" and distinguish the uncommon definition.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims **1-6 and 8-10** are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,199,014 to Walker et al. (Walker) in view of U.S. Patent Pub. No. 2004/0249565 to Park. Walker is concerned with a system for providing driving directions with visual cues. Park is concerned with displaying position information including images in a navigation system.

Regarding independent **claim 1**, "A road guide system in which a server (1) and a terminal (3) are connected via a network," – See Walker Fig. 1 where central controller 101 is connected to interface unit 102. (col. 5 lines 8-17)

"wherein said server (1) comprises:

road information storing means for storing road information including information regarding roads and information regarding predetermined guide points;" - The central controller includes multiple databases (col. 50-52), including a geography data base 211, (col. 6, lines 47-53) containing point and area labels describing features and locational references.

"three-dimensional image storing means for storing three-dimensional images of the guide points included in the road information, on which images a reference orientation is defined;" – Walker describes a photographic data base in col. 4 lines 60-65. The data base includes photographs taken from several angles including one each for the directions of an intersection. These photographs incorporate metadata detailing the direction of point of view of each photograph. Walker does not describe this database as incorporating panoramas, as the examiner interprets applicant's use of "three dimensional". Park, which is in a related field, however does describe storage and use of panoramas as illustrated in Figs. 7A-7C. Further, Park describes how to notate such images with directions – See Figs. 6 and 8. It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the images of Park with it's notations in the data base of Walker to improve a similar device in the same way to yield more complete coverage.

"guide image generating means for reading a three-dimensional image of a corresponding guide point in response to a request from said terminal (3), and generating a three-dimensional guide image by combining a figure indicating a road to

be taken by a user which road is searched out based on the road information on the read three-dimensional image; and" – In Walker Fig. 2, element 215 the photo matching process accomplishes the matching of route and image.

"guide image sending means for sending the three-dimensional guide image generated by said guide image generating means to said terminal (3), and" – In Walker Fig. 2, element 205 the communication port sends the combined information to the user.

"said terminal (3) comprises:

guide requesting means (35) for sending information specifying a guide point to said server (1) and requesting said server (1) to give a guide for a road to take at the guide point;" – In Walker Fig. 3 and col. 6 lines 3-19 a user device is described including an input device 310 for specifying a guide point and a communications port 305 for sending requests to the central computer.

"guide image receiving means (31, 32) for receiving the three-dimensional guide image sent from said server (1) in response to the requesting by said guide requesting means (35); and" – Walker's user device further uses the com port for receiving information from the central computer.

"displaying means (36) for displaying the three-dimensional guide image received by said guide image receiving means in a manner that a display orientation of the three-dimensional guide image is freely changed." – Walker's user device includes an output device 320 that could include a speaker, printer or display. In Walker, col. 7 lines 38-46 a way of using the device that updates the location sent to the central computer and in response receives new pictures as well as instructions is detailed. Alternately, in Park,

paragraph 43 viewing panoramic images in the direction the user is facing is detailed. It would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the panoramic images of Park in the updated viewing of Walker as a simple substitution of a known element to yield a predicable result.

Regarding **claim 2**, which is dependent on claim 1, wherein said three-dimensional image storing means stores three-dimensional images each made up of a plurality of images sequentially captured with a predetermined orientation referred to as a reference. – Walker col. 4, lines 59-64 describes capturing sequential images of interest and Fig.5 details the metadata on the images including orientation of the images.

Regarding independent claim 3: Claim 3 is a reiteration of the features of Claim 1 except that "intersections" are substituted for "guide points". In Walker, col. 8, lines 13-20 a typical request is illustrated using as starting point, an intersection and as an ending point a guide point (a high school) showing that Walker can use both intersections and guide points as inputs to the navigation system. Therefore Walker/Park anticipate claim 3.

"Regarding **claim 4**, which is dependent on claim 3, "wherein the guide image generating means generates a three-dimensional guide image including image portions corresponding to an orientation to which a user has been guided and an orientation to

which the user should go to, based on the read three-dimensional image." - In Walker, col. 8, lines 28-33 a set of instructions including an intersection, and an image of the intersection as would be seen by the traveler is described.

Regarding **claim 5**, which is dependent on claim 4, "wherein the displaying means (36) displays the three-dimensional guide image by changing the display orientation of the three-dimensional guide image from the orientation to which the user has been guided to the orientation to which the user should go to." – Walker does not detail changing the display from prior orientation to future guidance orientation, by Park in paragraph 48 details changing the image on reaching a node. It would have been obvious to one of ordinary skill in the art at the time of the invention to use Park's sequencing in the on-line mode of Walker to assure that the user is appraised of where to go.

Regarding independent **claim 6**, "A road guide system in which a server (1) and a terminal (3) are connected via a network," – See Walker Fig. 1 where central controller 101 is connected to interface unit 102. (col. 5 lines 8-17)

"wherein said server (1) comprises:

three-dimensional image storing means for storing three-dimensional images of predetermined guide points, on which images a reference orientation is defined;" – Walker describes a photographic data base in col. 4 lines 60-65. The data base includes photographs taken from several angles including one each for the directions of

an intersection. These photographs incorporate metadata detailing the direction of point of view of each photograph. Walker does not describe this database as incorporating panoramas, as the examiner interprets applicant's use of "three dimensional". Park however does describe storage and use of panoramas as illustrated in Figs. 7A-7C. Further, Park describes how to notate such images with directions – See Figs. 6 and 8.

"road information obtaining means for obtaining road information including information regarding roads and information regarding a corresponding guide point in response to a request from said terminal (3);" - - The central controller includes multiple databases (col. 50-52), including a geography data base 211, (col. 6, lines 47-53) containing point and area labels describing features and locational references. Since the central computer stores the data, it can retrieve it.

"guide image generating means for searching out a road along which guiding should be performed based on the road information obtained by said road information obtaining means, reading a three-dimensional image of the corresponding guide point from said three-dimensional image storing means, and generating a three-dimensional guide image by combining a figure indicating the searched-out road along which guiding should be performed on the read three-dimensional image; and" - – In Walker Fig. 2, element 215 the photo matching process accomplishes the matching of route and image.

"guide image sending means for sending the three-dimensional guide image generated by said guide image generating means to said terminal (3), and" – In Walker Fig. 2, element 205 the communication port sends the combined information to the user.

"said terminal (3) comprises:

guide requesting means (35) for sending information specifying a guide point to said server (1) and requesting said server (1) to give a guide for a road to take at the guide point;" – In Walker Fig. 3 and col. 6 lines 3-19 a user device is described including an input device 310 for specifying a guide point and a communications port 305 for sending requests to the central computer.

"guide image receiving means (31, 32) for receiving the three-dimensional guide image sent from said server (1) in response to the request by said guide requesting means (35); and" – Walker's user device further uses the com port for receiving information from the central computer.

"displaying means (36) for displaying the three-dimensional guide image received by said guide image receiving means (31, 32) in a manner that a display orientation of the three-dimensional guide image is freely changed." - – Walker's user device includes an output device 320 that could include a speaker, printer or display. In Walker, col. 7 lines 38-46 a way of using the device that updates the location sent to the central computer and in response receives new pictures as well as instructions is detailed. Alternately, in Park, paragraph 43 viewing panoramic images in the direction the user is facing is detailed.

Regarding independent **claim 8**, "A server for use in navigation, comprising:

three-dimensional image storing means for storing three-dimensional images of predetermined guide points, on which images a reference orientation is defined; " –

Walker describes a photographic data base in col. 4 lines 60-65. The data base includes photographs taken from several angles including one each for the directions of an intersection. These photographs incorporate metadata detailing the direction of point of view of each photograph. Walker does not describe this database as incorporating panoramas, as the examiner interprets applicant's use of "three dimensional". Park, which is in a related field, however does describe storage and use of panoramas as illustrated in Figs. 7A-7C. Further, Park describes how to notate such images with directions – See Figs. 6 and 8.

"guide route storing means for storing a guide route searched out in response to a request from a terminal (3) connected via a network (9);" – Walker Fig. 8 details the server's flowchart for responding to a request for a route. In step 804 the route found is stored.

"guide image generating means for reading a three-dimensional image of a guide point specified by a guide request from said terminal (3), and generating a three-dimensional guide image by combining a figure indicating a road to be taken by a user on the read three-dimensional image based on the guide route stored in said guide route storing means; and" " – In Walker Fig. 2, element 215 the photo matching process accomplishes the matching of route and image.

"guide image generating [sending] means for sending the three-dimensional guide image generated by said guide image generating means to said terminal (3)." -– In Walker Fig. 2, element 205 the communication port sends the combined information to the user.

Regarding independent **claim 9**,"A road guide method involving use of a system in which a server (1) and a terminal (3) are connected via a network, said server comprising road information storage unit for storing road information including information regarding roads and information regarding predetermined guide points and a three-dimensional image storage unit for storing three-dimensional images of the guide points included in the road information on which images a reference orientation is defined, said method comprising:" – Walker Fig 2 illustrates a central computer (server) including geography data base 211, image storage 212 which includes orientation and route location of the images.

"a guide requesting step (S11, S14) of sending information specifying a guide point from the terminal (3) to the server (1) and requesting the server to give a guide for a road to take at the guide point;" – Walker Fig. 8 details the route creation process and shows at step 801, the server receiving a request from the interface.

"a guide image generating step (S24) of reading a three-dimensional image of the corresponding guide point in response to the request at said guide requesting step (S11, S14), and generating a three-dimensional guide image by combining a figure indicating the road to be taken by a user which road is searched out based on the road information on the read three-dimensional image;" – Walker Fig. 9 details the matching process of using a sequential list of travel vectors 901 as an index into the image database 902 to determine which images to provide to the user.

"a guide image sending step (S25) of sending the three-dimensional guide image generated at said guide image generating step (S24) from the server (1) to the terminal (3);

a guide image receiving step (S15) of receiving the three-dimensional guide image sent from the server (1) at said guide image sending step (S25); and" – In Walker col. 4, lines 24-30, the generated route and images are sent to the terminal and received there to be presented to the user.

"a display controlling step (S15) of displaying the three-dimensional guide image received at said guide image receiving step (S15) on a display unit of the terminal (3) in a manner that a display orientation of the three-dimensional guide image is freely changed." – Walker's user device includes an output device 320 that could include a speaker, printer or display. In Walker, col. 7 lines 38-46 a way of using the device that updates the location sent to the central computer and in response receives new pictures as well as instructions is detailed. Alternately, in Park, paragraph 43 viewing panoramic images in the direction the user is facing is detailed.

Regarding independent **claim 10**, "A road guide method involving use of a server (1) comprising a three-dimensional image storage unit for storing three-dimensional images of predetermined guide points on which images a reference orientation is defined, and a terminal (3) connected to the server (1) via a network, said method comprising:" – Walker Fig 2 illustrates a central computer (server) including geography

data base 211, image storage 212 which includes orientation and route location of the images.

"a guide requesting step (S11, S14) of sending information specifying a guide point from the terminal (3) to the server (1) for requesting a guide for a road at the guide point;" – Walker Fig. 8 details the route creation process and shows at step 801, the server receiving a request from the interface.

"a road information obtaining step of obtaining road information including information regarding roads and information regarding the corresponding guide point in response to the request at said guide requesting step (S11, S14);" - The central controller includes multiple databases (col. 50-52), including a geography data base 211, (col. 6, lines 47-53) containing point and area labels describing features and locational references. Since the central computer stores the data, it can retrieve it.

" guide image generating step (S24) of searching out a road to be taken by a user based on the road information obtained at said road information obtaining step, reading a three-dimensional image of the corresponding guide point from the three-dimensional image storage unit, and generating a three-dimensional guide image by combining a figure indicating the searched-out road on the read three-dimensional image;" – Walker Fig. 9 details the matching process of using a sequential list of travel vectors 901 as an index into the image database 902 to determine which images to provide to the user.

"a guide image sending step (S25) of sending the three-dimensional guide image generated at said guide image generating step (S24) to the terminal (3);

a guide image receiving step (S15) of receiving the three-dimensional guide image sent at said guide image sending step (S25); and" – In Walker col. 4, lines 24-30, the generated route and images are sent to the terminal and received there to be presented to the user.

"a display controlling step (S15) of displaying the three-dimensional guide image received at said guide image receiving step (S15) on a display unit of the terminal (3) in a manner that a display orientation of the three-dimensional guide image is freely changed." -– Walker's user device includes an output device 320 that could include a speaker, printer or display. In Walker, col. 7 lines 38-46 a way of using the device that updates the location sent to the central computer and in response receives new pictures as well as instructions is detailed. Alternately, in Park, paragraph 43 viewing panoramic images in the direction the user is facing is detailed.

Claim **7** is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Walker/ Park in view of Japanese publication number JP 2002-311817 A to Mitsubishi Electric ('817). '817 is concerned with navigation including displaying both a map and a real image for a user.

Regarding **claim 7**, which is dependent on to claim 6, wherein

"said road information obtaining means obtains guide map information including the corresponding guide point" - - The central controller includes multiple databases (col. 50-52), including a geography data base 211, (col. 6, lines 47-53) containing point

and area labels describing features and locational references. Since the central computer stores the data, it can retrieve it.

"said guide image generating means further comprises means for generating a map image on which a display range of the generated three-dimensional guide image is displayed based on the guide map information obtained by said road information obtaining means, and said guide Image sending means sends the map image together with the three-dimensional guide image to said terminal (3), and

said displaying means comprises means for displaying the display range of the three-dimensional guide image on the map image in a manner that the display range is freely changed in conjunction with the display orientation of the three-dimensional guide image." – Walker/Park have shown displaying the map and panorama image in a coordinated manner including when the user changes the point of view. '817 shows highlighting the coordinate area shown by the panorama on the map (abstract and figure), It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate '817's outline with Walker/Park display to use a known technique to improve a similar device with predictable results.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patent No. 6,339,746 to Suguyama for guidance through landmark recognition; U.S. Patent No. 6,969,973 to Uttendaele et al. for use of images and maps in walking tour; U.S. Patent No. 7,272,498 to Singh for selecting images

based on orientation, time of day and currency; U.S. Patent Pub. No. 2006/0073853 to Cighir et al. for interactive navigational imaging using a cellular phone and panoramic images and U.S. Patent Pub. No. 2007/0076920 for mapping including panoramic images of the side of streets.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LIN B. OLSEN whose telephone number is (571)272-9754. The examiner can normally be reached on Mon - Fri, 8:30 -5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas G. Black can be reached on 571-272-6956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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